

Contents

FOREWORD	vii
LIST OF CONTRIBUTORS	ix
1. Quantitative Proteomics for Differential Protein Expression Profiling	1
<i>Christian K. Frese, Henk van den Toorn, Albert J.R. Heck, and Shabaz Mohammed</i>	
2. Protein Microarrays	29
<i>Fernanda Festa and Joshua LaBaer</i>	
3. Protein Biomarker Discovery: An Integrated Concept	63
<i>Andrei P. Drabovich, Eduardo Martínez-Morillo, and Eleftherios P. Diamandis</i>	
4. Biomarker Discovery with Mass Spectrometry Imaging and Profiling	89
<i>Sage J.B. Dunham, Elizabeth K. Neumann, Eric J. Lanni, Ta-Hsuan Ong, and Jonathan V. Sweedler</i>	
5. Protein-Protein Interactions	125
<i>Claire M. Delahunty and John R. Yates III</i>	
6. Mass Spectrometry of Intact Protein Complexes	145
<i>Jonathan T.S. Hopper and Carol V. Robinson</i>	
7. Cross-linking Applications in Structural Proteomics	175
<i>Evgeniy V. Petrotchenko, Jason J. Serpa, and Christoph H. Borchers</i>	

8. Functional Proteomics: Systematic Characterization of the Physical and Functional Organization of Cell Systems	197
<i>Pierre C. Havugimana, Pingzhao Hu, and Andrew Emili</i>	
9. High-Resolution Interrogation of Biological Systems via Mass Cytometry	215
<i>Heather M. Grundhofer, Michelle M. Kuhns, and Edgar A. Arriaga</i>	
10. Characterization of Drug-Protein Interactions by Chemoproteomics	247
<i>Markus Schirle, Marcus Bantscheff, and Bernhard Kuster</i>	
11. Phosphorylation	265
<i>Timothy D. Veenstra</i>	
12. Large-Scale Phosphoproteomics	291
<i>John R. Yates III</i>	
13. Probing Glycoforms of Individual Proteins Using Antibody-Lectin Sandwich Arrays: Methods and Findings from Studies of Pancreatic Cancer	311
<i>Brian B. Haab</i>	
INDEX	329